REMARKS

In the Office Action dated January 18, 2005, claims 1-14 were presented for examination. Claims 1-5 were rejected under 35 U.S.C. §101 alleging that the claimed invention is directed to non-statutory subject matter. Claims 1-14 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 1, 5, 6, 9, and 13 were rejected under 35 U.S.C. §102(a) as being anticipated by *Applicant's Admitted Prior Art (AAPA)*. Claims 1, 6, and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by *Smith*, U.S. Patent No. 5,832,068. Claims 2-4, 7, 8, 10-12, and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Smith* in view of *Applicant's Admitted Prior Art (AAPA)*.

The following remarks are provided in support of the pending claims and responsive to the Office Action of January 18, 2005 for the pending application.

I.   Interview With Examiner Filipczyk on March 15, 2005

On March 15, 2005 a telephonic interview took place between Applicant's Attorney and Examiner Filipczyk. During the interview, the new rejection under 35 U.S.C. §101 was discussed, as well as the other rejections in the outstanding Office Action. Applicant's Attorney noted that the §101 rejection was not necessitated by the amendment to the claims in the response to the earlier Office Action. Although the Examiner did not disagree with the Attorney, the Examiner refused to remove the finality placed on the pending application in the outstanding Office Action.

II.   Interview With Supervisor Metjahic on March 17, 2005

On March 17, 2005 a telephonic interview took placed between Applicant's Attorney and Supervisor Metjahic. During the interview, the rejection in the outstanding Office Action under

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35 U.S.C. §101 was discussed. Applicant's Attorney noted that the §101 rejection was not necessitated by the amendment to the claims in the response to the earlier Office Action, and requested removal of the finality on the outstanding Office Action. Supervisor Metjahic agreed with Applicant's Attorney and removed the finality status of the outstanding Office Action dated January 18, 2005.

III.   Interview With Examiner Filipczyk and Primary Examiner Coby on April 6, 2005

On April 6, 2005 an in-person interview took place between Applicant's Attorney and Examiners Filipczyk and Coby. During the interview, Applicant's proposed amendment to the claims was discussed, as well as the other rejections in the outstanding Office Action. At first, Examiner Filipczyk indicated that the proposed amendment to claim 1 would overcome the rejection under 35 U.S.C. §101. However, at the end of the interview, the Examiner indicated he may change his mind. In addition, the proposed claim amendments were discussed in view of the 35 U.S.C. §§102(a), 102(b), and 103(a) rejections. The Examiner indicated that he is concerned with the term alternating and that he would prefer more specific language, and that the language in claim 2 can be found in a plurality of databases. Applicant's Attorney requested that the Examiner produce a prior art document teaching this limitation since the prior art of record does not teach this limitation. Primary Examiner Coby appeared to agree with Applicant's Attorney indicating that he did not think the outstanding Office Action addressed all of the claim limitations. At the conclusion of the interview Examiner Filipczyk indicated that after a response to the outstanding Non-Final Office would be submitted by Applicant's Attorney, he will review any proposed claim amendments, and will issue a Final Office Action. Applicant's Attorney indicated that such a remark was improper in view of the fact that Examiner Filipczyk's remark was premature.

IV.   Rejection of Claims 1-4 under 35 U.S.C. §101

In the Office Action of January 18, 2005, the Examiner assigned to the application

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rejected claims 1-5 under 35 U.S.C. §101 alleging that the claimed invention is directed to non-statutory subject matter. More specifically, the Examiner alleges that claim 1 recites an abstract idea and therefore is directed to non-statutory subject matter. Applicant has amended claim 1 to further define the invention as a computer implemented method with instructions therein to perform the claimed steps. "For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea of mathematical algorithm in the technological arts." MPEP §2106, citing *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-1557 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). Accordingly, in view of Applicant's amendment to claim 1, Applicant respectfully requests that the Examiner remove the rejection to claims 1-5.

V.   Rejection of Claim 1-14 under 35 U.S.C. §112, second paragraph

In the Office Action of January 18, 2005, the Examiner assigned to the application rejected claims 1-14 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More specifically, the Examiner has alleged that the act of alternating between the input streams in claims 1, 6, and 9 does not further limit the claim, and with respect to claim 6, the term manager is indefinite. Applicant has amended claims 1, 6, and 9 to further claim the purpose of alternating between or among input streams responsive to a duplicate status identifier. In addition, Applicant has removed the term "manager" from claim 6. Accordingly, in view of the amendments to the claims submitted herewith, Applicant respectfully requests that the Examiner remove the rejection of claims 1-14 under 35 U.S.C. §112, second paragraph.

VI.   Rejection of claims 1, 5, 6, 9, and 13 under 35 U.S.C. §102(b)

In the Office Action of January 18, 2005, the Examiner assigned to the application rejected claims 1, 5, 6, 9, and 13 under 35 U.S.C. §102(b) as being anticipated by *Applicants Admitted Prior Art* (AAPA). The *AAPA* relates to merging two or more input data streams into a

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single sorted output stream. More specifically, *AAPA* shows omission of a swap of key values for key values that are duplicate. The *AAPA* criteria for alternating between input streams is limited to when the prior loser has a lower sort-key value than the current candidate. For equal or "duplicate" key values, after the key comparison the swap can be omitted . . ." Page 1, Par. 6, lines 2-3. Although the *AAPA* is clear in that prior art routines for performing key comparisons are aware of duplicate key values, it also clearly states that the *AAPA* does not expressly or inherently teach alternating between input streams with duplicate key values, as claimed by Applicant. Rather, *AAPA* is limited to showing an indication that the data items may be duplicates. Although the *AAPA* may have a technique for being aware of duplicate key values, it does not provide a responsive action to the awareness. On page 2 of the specification, the *AAPA* discussed switching between input streams responsive to a first sort key value being "greater than or equal to" a second sort key value. However, as indicated in this paragraph there are shortcomings with the prior art in that it only evenly consumes from two or more input stream when the number of input streams is an even power of 2. Applicant's amended claim , which is supported in the specification, places a limitation to avoid exhausting one input stream over another even when the number of input streams is not an even power of 2. Accordingly, the *AAPA* fails to illustrate an equitable solution for managing input streams containing duplicate data items.

Applicant's invention resolves the problem associated with duplicate values found in input streams, as opposed to acknowledging the presence thereof. The process of alternating between input streams containing duplicate key values reduces the quantity of sort-key comparisons required. Items from the input streams having duplicate values are evenly consumed rather than exhausting the duplicate values from one input stream at a time, even when the number of input streams is not an even power of 2. Accordingly, Applicant's method for handling the duplicate values is more efficient and effective than the prior art.

There is no teaching in *AAPA* for pro-actively handling duplicate values in an input stream in the manner taught by Applicant. Nor is there a teaching in *AAPA* to alternate between input streams containing duplicate values in the manner taught by Applicant. In order for the

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claimed invention to be anticipated under 35 U.S.C. §102(b), the prior art must teach all claimed limitations presented by the claimed invention. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F. 2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987)). As mentioned above, *AAPA* does not show all of the elements as claimed by Applicant in pending amended claims 1, 6, and 9. Specifically, *AAPA* does not show the process of alternating between input streams bearing duplicate data items, rather *AAPA* merely shows acknowledgment of the existence of a duplicate data item. Accordingly, *AAPA* clearly fails to teach the limitations pertaining to alternating between data streams containing duplicate data items as presented in Applicant's pending claims 1, 5, 6, 9, and 13.

VII.   Rejection of claims 1, 6, and 9 under 35 U.S.C. §102(b)

In the Office Action dated January 18, 2005, the Examiner assigned to the application rejected claims 1, 6, and 9 under 35 U.S.C. §102(b) as being unpatentable over *Smith*, U.S. Patent No. 5,832,068. *Smith* relates to a method of excluding duplicate data records. Upon receiving the data record, a unique identifier is assigned to the record. Thereafter, a record excluder compares an account number portion of the identifier with the record identifiers stored in a data record index. If the excluder determines that the data record is a duplicate record, the data record of the previously received data record is transferred to an exclusion list while the new data record is added to the data record index. Accordingly, Smith maintains an active list of data records and an exclusion list of data records, wherein the exclusion list pertains to duplicate data records.

Applicant's invention functions on a different principle than that taught in *Smith* by performing a different act in response to a duplicate data item. The *Smith* patent places duplicate records in a secondary list, *i.e.* exclusion list. However, Applicant's invention does not utilize an exclusion list. Rather, in response to a duplicate record, Applicant alternates between input streams that contain the duplicate data items to avoid a deadlock, as shown in amended claims 1,

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6, and 9, and thereby manages the duplicate records without the need to create additional data records such as an exclusion list. In order for the claimed invention to be anticipated under 35 U.S.C. §102(b), the prior art must teach all claimed limitations presented by the claimed invention. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F. 2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987)). As mentioned above, *Smith* does not show all of the elements as claimed by Applicant in pending claims 1, 6, and 9. Specifically, *Smith* does not provide support for alternating between input streams in response to a duplicate data item, rather *Smith* merely substitutes the new data item for the old data item, and places the old data item in an exclusion list. See Col. 8, lines 12-28. Accordingly, *Smith* clearly fails to teach the limitations pertaining to the functionality following determination of a duplicate data item as presented in Applicant's pending amended claims 1, 6, and 9.

Smith does not anticipate the invention of Applicant based upon the legal definition of anticipation. "A previous patent anticipates a purported invention only where, except for insubstantial differences, it contains all of the same elements operating in the same fashion to perform an identical function." *Saunders v. Air-Flo Co.*, 646 F.2d 1201, 1203 (7th Cir. 1981) citing *Popeil Brothers, Inc. v. Schick Electric, Inc.*, 494 F. 2d 162, 164 (7th Cir. 1974) (holding patents were not invalid as being anticipated by or obvious in light of prior art). Although the prior art cited by the Examiner relates to data records and processing associated with duplicate records, *Smith* fails to show instructions for alternating between input streams in response to identifying a duplicate record as presented in Applicant's claimed invention. Accordingly, Applicant respectfully requests that the Examiner remove the rejection of claims 1, 6, and 9, and provide allowance of this application.

VIII. Rejection of Claims 2-4, 7, 8, 10-12, and 14 under 35 U.S.C. §103(a)

In the Office Action dated January 18, 2005, the Examiner assigned to the application rejected claims 2-4, 7, 8, 10-12, and 14 under 35 U.S.C. §103(a) as being unpatentable over

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Smith, U.S. Patent No. 5,832,068, in view of *Applicants Admitted Prior Art (AAPA)*.

The comments pertaining to *AAPA* and *Smith* in the Response to the First Office Action and above are hereby incorporated by reference.

There is no teaching in *AAPA* for an indicator to be an integer corresponding to one of four values. At most, *AAPA* teaches only three of the four values, and an algorithm responsive to the three identified values. As noted by the Examiner in Section III, "0 is equal or duplicate". See Second Office Action, page 4. The *Smith* patent teaches identifying duplicate records. *See* Fig. 3. However, whether considered individually or combined, the *AAPA* and *Smith* patent do not teach the four integer options as claimed by Applicant. "To establish a prima facie case of obviousness . . . the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *AAPA* does not teach the four integer options as claimed by Applicant. In fact, at most *AAPA* may only be interpreted to include three of the four integer options. Similarly, *Smith* teaches the duplicate integer option, but does not teach the four options claimed by Applicant.

In order to apply *AAPA* to Applicant's pending application, the *AAPA* must be modified and reconfigured to support the four integer options of Applicant. However, utilizing Applicant's four integer options goes against the teachings of *AAPA*. "Although a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.' " MPEP §2143.01 (citing *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430 (Fed. Cir. 1990). *AAPA* does not teach or suggest the four integer options as claimed by Applicant. To read *AAPA* as providing or supporting all four of these integer options would require a modification to the invention of *AAPA* not envisioned or required. Similarly, to read *Smith* as providing the fourth option not taught in the *AAPA* would require a modification to the invention of *Smith* not envisioned or required. *Smith* does not teach the fourth integer missing from *AAPA*. *Smith* teaches identifying duplicate records. As noted by

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the Examiner, the duplicate integer is taught in the *AAPA*, it is the *AAPA's* response to the duplicate integer that differs from Applicant. The only suggestion for each of the four integer options is derived from Applicant's invention. Absent Applicant's invention, there is no suggestion or motivation within *AAPA* or *Smith* for such modifications. "It is impermissible to use the claimed invention as an instructions manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780 (Fed. Cir. 1992) (citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991)). Yet this is the very process that the Examiner has attempted to undertake. The entirety of Applicant's invention is greater than the sum of the parts that comprise the novelty of the invention. "[T]he linchpin is not whether the individual components of the patent were obvious at the time of the invention, but whether the aggregation produced a new or different result or achieved a synergistic effect." *Id.* (Citing Continental Oil Co. v. Cole, 634 F.2d 188, 197 (5th Cir. 1981).
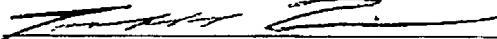
Even if as a general matter it would be trivial to combine the teachings of *AAPA* with the teachings of *Smith*, it would not necessarily be obvious to combine them in view of one another. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. *See* MPEP §2143. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure." MPEP §2143, (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Here *AAPA* teaches the use of three options. However, as noted by the Examiner, *AAPA* fails to teach or suggest the use of four options. While *Smith* teaches identification of duplicate records, duplicate is one of the four integers identified in the *AAPA* - it is not the missing option, there is no suggestion of employing a four integer option. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination." MPEP §2143.01 (citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)). The only suggestion for the combination of elements that form Applicant's invention is found in Applicant's invention. Accordingly, the Applicant respectfully submits that claims 2-4, 7, 8, 10-

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12, and 14 would not have been obvious for the above outlined reasons and allowance of these claims is respectfully requested.

For the reasons outlined above, withdrawal of the rejection of record and an allowance of this application are respectfully requested.

Respectfully submitted,

By: _____

Rochelle Lieberman
Registration No. 39,276
Attorney for Applicant

Lieberman & Brandsdorfer, LLC
12221 McDonald Chapel Drive
Gaithersburg, MD 20878-2252
Phone: (301) 948-7775
Fax: (301) 948-7774
Email: rocky@legalplanner.com

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